

REMARKS

Claims 1-30 were previously pending in this patent application. Claims 1-30 stand rejected. Herein, Claims 1, 11, and 21 have been amended. Accordingly, after this Amendment and Response, Claims 1-30 remain pending in this patent application. Further examination and reconsideration in view of the claims, remarks, and arguments set forth below is respectfully requested.

35 U.S.C. Section 103(a) Rejections

Claims 1 and 6-10 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Crafts, U.S. Patent No. 6,180,998 (hereafter Crafts) in view of Moyer et al, U.S. Patent No. 5,355,008 (hereafter Moyer). These rejections are respectfully traversed.

Independent Claim 1 recites:

A semiconductor device having a surface, comprising:
a well region of a first conductivity;
a plurality of conductive sub-surface regions of said first conductivity each ***formed beneath said surface and beneath said well region of said first conductivity***, wherein said conductive sub-surface regions ***form a sub-surface structure*** having a first RC property; and
a metal mesh structure formed above said surface, wherein said ***metal mesh structure is coupled to said sub-surface structure via a plurality of spaced tap contacts***, and wherein said sub-surface structure and said metal mesh structure form a combined structure having a second RC property that is lower than said first RC property.
(emphasis added)

It is respectfully asserted that there is no suggestion, motivation, or teaching found in the cited references (Crafts and Moyer) to combine them.

Moreover, the combination of the cited references does not teach, suggest, or motivate all the limitations in Independent Claim 1.

Furthermore, Independent Claim 1 recites the limitations, "plurality of conductive sub-surface regions of said first conductivity each ***formed beneath said surface and beneath said well region of said first conductivity***" (emphasis added), "said conductive sub-surface regions ***form a sub-surface structure***" (emphasis added), and "wherein said ***metal mesh structure is coupled to said sub-surface structure via a plurality of spaced tap contacts***" (emphasis added). In contrast, Crafts discloses in Figure 7 that a conductive mesh (96) is connected to the N-well (68) at numerous intervals established by the locations of the extension posts (88). [Crafts; Figure 7; Col. 10, lines 41-53]. Crafts fails to disclose a plurality of conductive sub-surface regions of the first conductivity each formed beneath the surface and beneath the well region of the first conductivity, as in the invention of Independent Claim 1. Further, Crafts does not disclose that the conductive sub-surface regions form a sub-surface structure, as in the invention of Independent Claim 1. Moreover, Crafts shows a conductive mesh (96) that is connected to the N-well (68) at the extension posts (88) instead of showing a metal mesh that is coupled to a sub-surface structure (which is formed beneath the well region) via a plurality of spaced tap contacts, as in the invention of Independent Claim 1. Furthermore, Moyer fails to disclose the cited limitations of Independent Claim 1. Therefore, it is respectfully submitted that Independent Claim 1 is patentable over the combination of Crafts and Moyer and is in condition for allowance.

Dependent Claims 6-10 are dependent on allowable Independent Claim 1, which is allowable over the combination of Crafts and Moyer. Hence, it is respectfully submitted that Dependent Claims 6-10 are patentable over the combination of Crafts and Moyer for the reasons discussed above.

Statement Pursuant to 35 U.S.C. Section 103(c) to Disqualify Patent Application

Publication No. 2004/0124475

The inventive entity of the present Patent Application No. 10/712,129 is different from the inventive entity of U.S. Patent Application Publication No. 2004/0124475 since all inventors are not the same for the present Patent Application No. 10/712,129 and U.S. Patent Application Publication No. 2004/0124475. Moreover, present Patent Application No. 10/712,129 and U.S. Patent Application Publication No. 2004/0124475 were, at the time the invention of present Patent Application No. 10/712,129 was made, owned by or subject to an obligation of assignment to the same person, Transmeta Corporation.

The above statements alone are sufficient to disqualify U.S. Patent Application Publication No. 2004/0124475 from being used in a rejection under 35 U.S.C. Section 103(a) against the claims of present Patent Application 10/712,129 since U.S. Patent Application Publication No. 2004/0124475 qualifies as prior art only under 35 U.S.C. Section 102(e) to support the rejection pursuant to 35 U.S.C. Section 103(a).

Claims 2-5 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Crafts, U.S. Patent No. 6,180,998 (hereafter Crafts) in view of Moyer et al, U.S. Patent No. 5,355,008 (hereafter Moyer), and further in view of Pelham et al., U.S. Patent Application Publication No. 2004/0124475 (hereafter Pelham). These rejections are respectfully traversed.

As stated above, U.S. Patent Application Publication No. 2004/0124475 (Pelham) is disqualified from being used in a rejection under 35 U.S.C. Section 103(a) against the claims of the present Patent Application No. 10/712,129. Hence, Dependent Claims 2-5 are patentable over the combination of Crafts and Moyer and are in condition for allowance for the reasons discussed in connection with Independent Claim 1.

Claims 11 and 16-20 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Crafts, U.S. Patent No. 6,180,998 (hereafter Crafts) in view of Moyer et al, U.S. Patent No. 5,355,008 (hereafter Moyer), and further in view of Ratchkov et al., U.S. Patent Application Publication No. 2004/0085099 (hereafter Ratchkov). These rejections are respectfully traversed.

With respect to Independent Claim 11, it is respectfully submitted that Independent Claim 11 recites similar limitations as in Independent Claim 1.

Therefore, Independent Claim 11 is allowable over the combination of Crafts and Moyer for reasons discussed in connection with Independent Claim 1.

Moreover, Ratchkov fails to disclose the limitations, "plurality of conductive sub-surface regions of said first conductivity each ***formed beneath said surface and beneath said well region of said first conductivity***" (emphasis added), "said conductive sub-surface regions ***form a sub-surface structure***" (emphasis added), and "wherein said ***metal ring structure is coupled to said sub-surface structure via a plurality of spaced tap contacts***" (emphasis added), as in the invention of Independent Claim 11. Thus, Independent Claim 11 is patentable over the combination of Crafts, Moyer, and Ratchkov and is in condition for allowance.

Dependent Claims 16-20 are dependent on allowable Independent Claim 11, which is allowable over the combination of Crafts, Moyer, and Ratchkov. Hence, it is respectfully submitted that Dependent Claims 16-20 are patentable over the combination of Crafts, Moyer, and Ratchkov for the reasons discussed above.

Claims 12-15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Crafts, U.S. Patent No. 6,180,998 (hereafter Crafts) in view of Moyer et al, U.S. Patent No. 5,355,008 (hereafter Moyer), in view of Ratchkov et al., U.S. Patent Application Publication No. 2004/0085099 (hereafter Ratchkov),

and further in view of Pelham et al., U.S. Patent Application Publication No. 2004/0124475 (hereafter Pelham). These rejections are respectfully traversed.

As stated above, U.S. Patent Application Publication No. 2004/0124475 (Pelham) is disqualified from being used in a rejection under 35 U.S.C. Section 103(a) against the claims of the present Patent Application No. 10/712,129. Hence, Dependent Claims 12-15 are patentable over the combination of Crafts, Moyer, and Ratchkov and are in condition for allowance for the reasons discussed in connection with Independent Claim 11.

Claims 21 and 26-30 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Crafts, U.S. Patent No. 6,180,998 (hereafter Crafts) in view of Moyer et al, U.S. Patent No. 5,355,008 (hereafter Moyer), and further in view of Igarashi et al., U.S. Patent No. 6,813,756 (hereafter Igarashi). These rejections are respectfully traversed.

With respect to Independent Claim 21, it is respectfully submitted that Independent Claim 21 recites similar limitations as in Independent Claim 1. Therefore, Independent Claim 21 is allowable over the combination of Crafts and Moyer for reasons discussed in connection with Independent Claim 1. Moreover, Igarashi fails to disclose the limitations, "plurality of conductive sub-surface regions of said first conductivity each **formed beneath said surface and beneath said well region of said first conductivity**" (emphasis added),

"said conductive sub-surface regions ***form a sub-surface structure***" (emphasis added), and "wherein said ***metal branching tree structure is coupled to said sub-surface structure via a plurality of spaced tap contacts***" (emphasis added), as in the invention of Independent Claim 21. Thus, Independent Claim 21 is patentable over the combination of Crafts, Moyer, and Igarashi and is in condition for allowance.

Dependent Claims 26-30 are dependent on allowable Independent Claim 21, which is allowable over the combination of Crafts, Moyer, and Igarashi. Hence, it is respectfully submitted that Dependent Claims 26-30 are patentable over the combination of Crafts, Moyer, and Igarashi for the reasons discussed above.

Claims 22-25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Crafts, U.S. Patent No. 6,180,998 (hereafter Crafts) in view of Moyer et al, U.S. Patent No. 5,355,008 (hereafter Moyer), in view of Igarashi et al., U.S. Patent No. 6,813,756 (hereafter Igarashi), and further in view of Pelham et al., U.S. Patent Application Publication No. 2004/0124475 (hereafter Pelham). These rejections are respectfully traversed.

As stated above, U.S. Patent Application Publication No. 2004/0124475 (Pelham) is disqualified from being used in a rejection under 35 U.S.C. Section 103(a) against the claims of the present Patent Application No. 10/712,129.

Hence, Dependent Claims 22-25 are patentable over the combination of Crafts, Moyer, and Igarashi and are in condition for allowance for the reasons discussed in connection with Independent Claim 21.

CONCLUSION

It is respectfully submitted that the above claims, arguments, and remarks overcome all rejections. All remaining claims (Claims 1-30) are neither anticipated nor obvious in view of the cited references. For at least the above-presented reasons, it is respectfully submitted that all remaining claims (Claims 1-30) are in condition for allowance.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Respectfully submitted,

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